

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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JC10 Rec'd PCT/PTO 19 MAR 2002

In re application of: Shizuo AKIRA et al.

Appl. No. Unassigned

Confirmation No.

Filed: March 19, 2002

Art Unit: Unassigned

Examiner: Unassigned

Atty. Docket No. 31671-178057

For: RECEPTOR PROTEINS
SPECIFICALLY RECOGNIZING
BACTERIAL DNA

Customer No.



26694

PATENT TRADEMARK OFFICE

Preliminary Amendment

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to calculation of the fees, please amend the claims attached to the specification as follows:

A¹
4. (amended) A DNA encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence, which hybridizes with the DNA of claim 3 under stringent conditions.

A²
7. (amended) A DNA encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence, which hybridizes with the DNA of claim 6 under stringent conditions.

A³
13. (amended) A fusion protein comprising the protein according to claim 8 fused with a marker protein and/or a peptide tag.

14. (amended) An antibody specifically bound to the protein according to claim 8.

A⁴ 16. (amended) A host cell comprising an expression system expressing the protein according to claim 8.

20. (amended) The non-human animal according to claim 17 characterized in that a rodent animal is a mouse.

A⁵ 21. (amended) A method of preparing a cell expressing a protein having reactivity against bacterial DNA having an unmethylated CpG sequence characterized in that the DNA according to claim 1 is introduced into a cell wherein a gene function encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence is destroyed on a chromosome.

A⁶ 26. (amended) A screening method for an agonist or an antagonist of a protein having reactivity against bacterial DNA having the unmethylated CpG sequence according to claim 24 using a mouse as a non-human animal.

27. (amended) An agonist or an antagonist of a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence obtained by the screening method for an agonist or an antagonist of a receptor protein specifically recognizing bacterial DNA having the unmethylated CpG sequence according to claim 23.

A⁷ 30. (amended) A kit used to diagnose a disease in a test DNA sample, which disease is related to the deletion, substitution and/or addition in a sequence of DNA encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence, which kit comprises the DNA according to claim 3.

Please add the following claims

A⁸ Claim 31 (new) The non-human animal according to claim 18 characterized in that a rodent animal is a mouse.

Claim 32 (new) A screening method for an agonist or an antagonist of a protein having reactivity against bacterial DNA having the unmethylated CpG sequence according to claim 25 using a mouse as a non-human animal.

A⁸
Claim 33 (new) An agonist or an antagonist of a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence obtained by the screening method for an agonist or an antagonist of a receptor protein specifically recognizing bacterial DNA having the unmethylated CpG sequence according to claim 24.

Claim 34 (new) An agonist or an antagonist of a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence obtained by the screening method for an agonist or an antagonist of a receptor protein specifically recognizing bacterial DNA having the unmethylated CpG sequence according to claim 25.

REMARKS

This Preliminary Amendment is made to eliminate multiple claim dependency.
Examination on the merits of the application is requested. A marked up version showing the changes made to the claims is attached.

Date:

3/19/02

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

4. (amended) [The] A DNA [according to claim 1] encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence, which hybridizes with the DNA [comprising a gene according to] of claim 3 under [a] stringent conditions.
7. (amended) [The] A DNA [according to claim 1] encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence, which hybridizes with the DNA [comprising the gene according to] of claim 6 under [a] stringent conditions.
13. (amended) A fusion protein comprising the protein according to [any one of] claim[s] 8[to 12] fused with a marker protein and/or a peptide tag.
14. (amended) An antibody specifically bound to the protein according to [any one of] claim[s] 8 [to 12].
16. (amended) A host cell comprising an expression system expressing the protein according to [any one of] claim[s] 8 [to 12].
20. (amended) The non-human animal according to [any one of] claim[s] 17 [to 19] characterized in that a rodent animal is a mouse.
21. (amended) A method of preparing a cell expressing a protein having reactivity against bacterial DNA having an unmethylated CpG sequence characterized in that the DNA according to [any one of] claim[s] 1[to 7] is introduced into a cell wherein a gene function encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence is destroyed on a chromosome.

26. (amended) A screening method for an agonist or an antagonist of a protein having reactivity against bacterial DNA having the unmethylated CpG sequence according to [either of] claim[s] 24 [or 25] using a mouse as a non-human animal.
27. (amended) An agonist or an antagonist of a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence obtained by the screening method for an agonist or an antagonist of a receptor protein specifically recognizing bacterial DNA having the unmethylated CpG sequence according to [any of] claim[s] 23 [to 26].
30. (amended) A kit used to diagnose a disease[s] in a test DNA sample, which disease is related to the deletion, substitution and/or addition in a sequence of DNA encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence, which kit comprises the DNA according to claim 3. [which can compare a sequence of DNA encoding a receptor protein specifically recognizing bacterial DNA having an unmethylated CpG sequence in a test body with a sequence of bases in the DNA according to claim 3.]